UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,238	11/04/2003	Kishore Karighattam	AMDP772US	5261

90237   7590   12/01/2010
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EXAMINER
MAUNG, ZARNI

ART UNIT	PAPER NUMBER
2451	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2010*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1,8-18 and 23-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13-18 and 23-25* is/are allowed.

6)☒ Claim(s) *1,8-12,26-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

This action is responsive to the amendment and remarks filed on September 30,

2010. Claims 1, 8-18, 23-25 and new claims 26-27 are pending. Claims 2-7, 19-22

have been cancelled.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ronciak (US 2004/0120339) in view of Rajagopalan et al. (US 2004/0249998),

hereinafter referred to as Rajagopalan.

As per claim 1, Ronciak discloses a method for partial coalescing transmit

buffers comprising: obtaining a data packet from host software, wherein the data packet

is located in an array of virtual buffers that each map to one or more physical buffers in

a system memory (Fig. 4-5, Para. 0026,0030); analyzing the virtual buffers and the

physical buffers associated with the data packet (Para. 0038,0042-0043,0045-0047);

and selectively copying either selected ones of the virtual buffers or selected ones of

the physical buffers into a coalesced physical buffer based on the analysis (Fig.

5, Para. 0034-0035,0045-0047). However, Ronciak does not explicitly disclose

assembling a coalesced array from the coalesced physical buffer and one or more

respective non-selected and non-coalesced virtual or physical buffers. Rajagopalan

teaches assembling a coalesced array from a coalesced physical buffer and one or

more respective non-selected and non-coalesced virtual or physical buffers (Para.

0131-0132, 0134-0136 - see DMA engine receiving transmit buffer descriptor including

physical address of the location of the transmit buffer at Para. 0134-0136, see also

protocol headers stored at TCP Stack Memory Space 225 at Para. 0131-0132, note that

output frames (coalesced arrays) are constructed by combining applicable transmit

buffer data (physical buffer data) and protocol header data stored at the TCP Stack

Memory Space 225 (non-selected and non-coalesced virtual or physical buffer). It would

have been obvious to one having ordinary skill in the art at the time the invention was

made to incorporate the use of a coalesced array assembled from a coalesced physical

buffer and one or more non-selected and non-coalesced virtual or physical buffers with

the prior art of Ronciak. One of ordinary skill in the art would have done so for the

purpose of constructing frames for transmission by appending a prototype header to

buffered payload data according to a specified segment size (Para. 0134-0136).

As per claim 8, Ronciak additionally discloses wherein selectively copying

selected ones of the one or more virtual or physical buffers comprises iteratively

analyzing, in order, each virtual or physical buffer associated with the data packet such

that the composite size of the selected ones is less than a predetermined size (Para.

0029-0031,0045-0046).

As per claim 9, Ronciak additionally discloses wherein selectively copying

selected ones of the one or more virtual or physical buffers comprises performing the

following beginning with a first buffer: obtaining a size for a current or physical buffer (Para. 0030,0039- 0041,0045-0046); computing a composite size as a function of the current virtual or physical buffer size and a composite virtual or physical buffer length (Para. 0039-0041,0045- 0046); and on the composite virtual or physical buffer size being less than a predetermined size, selecting the current or physical buffer and adding the current virtual or physical size to the composite virtual or physical buffer length (Para. 0045- 0047).

As per claim 10, Ronciak additionally discloses determining a predetermined size according to a desired overall system performance, and using the predetermined size in identifying the selected ones of the virtual or physical buffers (Para. 0010-0011,0029-0031,0045-0047).

As per claim 11, Ronciak additionally discloses determining a predetermined size according to a desired network throughput, and using the predetermined size in identifying the selected ones of the virtual or physical buffers (Para. 0010-0011,0029-0031,0045-0047).

As per claim 12, Ronciak additionally discloses determining the predetermined size according to a desired overall system performance, network throughput, and system resource utilization, and using the predetermined size in identifying the selected ones of the virtual or physical buffers (Para. 0010-0011,0029-0031,0045-0047).

As per claims 26 and 27, Ronciak discloses the a method for partial coalescing transmit buffers, wherein assembling the coalesced array comprises assembling the coalesced physical buffer with one or more virtual buffers comprising header information and data or with one or more physical buffers comprising header information and data (inherent in the header and payload of the TCP network media communications) , and wherein the coalesced array comprises the entire coalesced physical buffer (fig. 1).

Allowable Subject Matter

Claims 13-18 and 23-25 are allowable over the prior art of record.

Response to Arguments

Applicant's arguments filed on September 30, 2010 have been fully considered but they are not persuasive. The applicants argued in substance that "*The combination of Ra]agopalan et al. with Ronciak is improper to teach assembling a coalesced array from a coalesced physical buffer and a non-coalesced physical or virtual buffer, as provided in claim 1."*

In reply, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would

have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zarni Maung whose telephone number is (571) 272-3939. The Examiner can normally be reached on Monday-Friday from 8:30 to 5:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, John Follansbee can be reached at (571) 272-3964. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system, status information for published

application may be obtained from either Private or Public PAIR, for unpublished

application Private PAIR only (see http://pair-direct.uspto.gov or the Electronic Business

Center at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

Hand carried or delivered to:

Customer Service Window located at the Randolph Bldg. 401

Dulany St. Alexandria, VA 22314

Faxed to the Central Fax Office:

(571) 273-8300 (New Central Fax No.)

Or Telephone

(571) 272-2100 for TC 2100 Customer Service Office.

/Zarni Maung/

Primary Examiner, Art Unit 2451